

Stable memory test scores for Alzheimer's patients with omega-3 intake

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A unique study on Alzheimer's disease examines the effect of omega-3 fatty acids with memory tests and testing of spinal fluid.

"This study is unique. It is the first ever to collect data on these new biomarkers in people with Alzheimer's [disease](#) treated with omega-3 [fatty acids](#) (FFAs)," says Yvonne Freund-Levi, who has collaborated with researchers at Karolinska Institute, Sahlgrenska University Hospital and Uppsala University.

She does point out that it is a small study—it includes 33 patients, 18 of whom were given omega-3 supplements morning and evening, and 15 who made up the control group. Spinal fluid samples were collected, and patients performed a memory [test](#), both at the start of the study and after six months.

"We can see that the memory function of the patients in the group that had taken omega-3 is stable, whereas the patients in the [control group](#) have deteriorated. That's what the [memory tests](#) show," says Yvonne Freund-Levi.

"But we can't see any differences between the groups when we look at the various biomarkers in the spinal fluid samples."

What the researchers can see, however, is that there are differences within the group given omega-3. There was an increase of two of the markers that are linked to damaged nerve cells. There is, however, no clinical link to the memory tests.

"Even if this data isn't enough for us to change our recommendations to patients at this time, it is an interesting material for researchers to build on."

This study is based on a larger study with over 200 patients with mild to moderate Alzheimer's disease, initiated by Yvonne Freund-Levi and her research team 15 years ago. In that study, the researchers examined, among other things, whether omega-3 transfers from the supplements to

the brain—and concluded that that was indeed the case.

"We are cautious about giving recommendations, but we know that starting early is by far the best thing—it is difficult to influence the disease at a later stage. The best piece of advice we have to offer at the moment is to be physically active and to include omega-3 in your diet—in the form of oily fish or as supplements. We can see a difference in the results of the [memory](#) tests. Patients who were taking omega-3 supplements at an early stage of the disease scored better," says Freund-Levi, who is a researcher in neuroscience at Örebro University.

A major step forward is that researchers in the future will be able to examine the biomarkers in blood samples rather than having to perform spinal tap procedures on the patients.

"We have already tested this approach at Sahlgrenska University Hospital. Without a doubt, it is so much better for the patients."

More information: Avin Tofiq et al, Effects of Peroral Omega-3 Fatty Acid Supplementation on Cerebrospinal Fluid Biomarkers in Patients with Alzheimer's Disease: A Randomized Controlled Trial—The OmegAD Study, *Journal of Alzheimer's Disease* (2021). [DOI: 10.3233/JAD-210007](https://doi.org/10.3233/JAD-210007)

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